

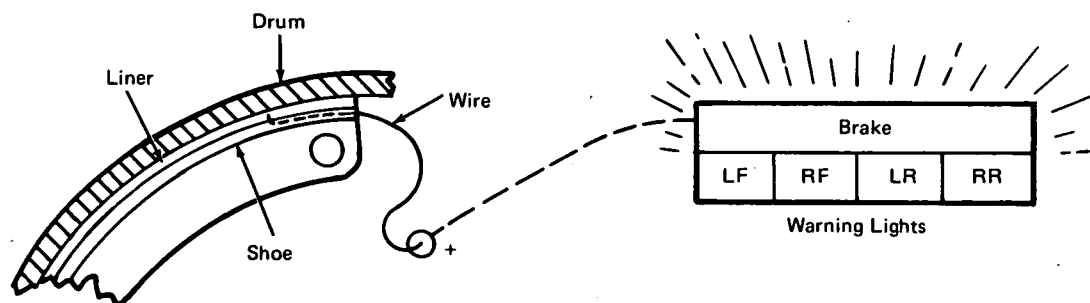
NASA TECH BRIEF

Lyndon B. Johnson Space Center



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Brake Wear Warning Device: A Concept



The problem:

In recent years, automobile brake systems have been modernized by several safety improvements. These include dual brake circuits, warning lights for a leaky hydraulic system, and a more recently introduced device that prevents brakes from locking. Yet with all this contribution to safety, an average motorist is not equipped to detect worn brake linings.

The solution:

A heat insulated wire partially penetrating the brake lining and connected to a warning light is capable of detecting worn brakes.

How it's done:

The wire is introduced through the brake shoe and partially into the brake lining (see figure) to the critical point. The wire is connected to the positive terminal and the light bulb. When the brakes wear to the critical point, the contact between the wire and the wheel drum will ground the circuit and turn the warning light on to caution the motorist that the brakes need servicing.

Because brake wear is frequently uneven, each wheel should be equipped with such a circuit and a light correspondingly labeled on the instrument panel.

Notes:

1. The same concept can be used in certain drilling applications to warn the operator when he reaches a metal part.
2. No further documentation is available. Specific questions, however, may be directed to:

Technology Utilization Officer
Lyndon B. Johnson Space Center
Code JM7
Houston, Texas 77058
Reference: B73-10123

Patent status:

NASA has decided not to apply for a patent.

Source: S. F. Hawkins of
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Category 02, 05